REMARKS

Claims 1-25 are pending in the application. Claims 1-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,748,974 to <u>Johnson</u> in view of U.S. Patent No. 5,265,014 to <u>Haddock</u> for the reasons set forth on pages 2-13 of the Office Action. By the present Amendment, claims 1, 6, 10, 15, 19, and 20 have been amended. Applicants respectfully request reconsideration of the claim rejections based on the following remarks.

The inventions of claims 1 and 10 are, in general, directed to systems and method for managing dialog across *a plurality of active applications* and input modalities in a conversational system. A dialog manager determines a current context of a given command by reviewing a multi-modal history of events The method further includes *changing dialog focus to one of the active applications based on user interaction with the conversational system.*

Further, claim 19 is directed to a system comprising *a dialog manager that maintains a current dialog focus for one of a plurality of active applications and a list of expected responses for determining a current context of a given command.* In addition, the system of claim 19 comprises a *multi-modal history for maintaining an event list of all events which affected a state of the system. The multi-modal history is adapted to provide input to the dialog manager for determining the current context of the commands received, wherein the events in the multi-modal history include change of dialog focus events.*

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To establish a prima facie case of obviousness, there must be some suggestion or motivation in the references or in the knowledge generally available to one skilled in the art to combine the reference teachings. In addition, the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination must both be found in the prior art and <u>not</u> based on applicant's disclosure (see, e.g., MPEP 2141, 2143, 2143.03). It is respectfully submitted that at the very minimum, the combination of <u>Johnson</u> and <u>Haddock</u> is legally deficient to establish a prima facie case of obviousness under 35 U.S.C. 103 to support the rejection of claims 1, 10 and 19.

For instance, with respect to claims 1 and 10, the combination of <u>Johnson</u> and <u>Haddock</u> does not disclose or suggest determining (by a dialog manager) an application associated with a command by reviewing a multi-modal history of events, *wherein the application associated with the command is one of a plurality of active applications that are unknown to the dialog manager.* Further, such combination does not disclose or suggest *changing dialog focus to one of the active applications based on user interaction with the conversational system*, as essentially claimed in claims 1 and 10.

Indeed, although <u>Johnson</u> discloses a method for performing cross-application tasks (as noted by Examiner) by processing multi-modal input for a *current application* (i.e., the application the user is running) to perform a task in another (auxiliary) application, <u>Johnson</u> does not disclose determining an application associated with a command, *wherein the application*

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associated with the command is one of a plurality of active applications that are unknown to the dialog manager.

More specifically, Johnson discloses a system and method whereby one current (active) application is open and "in focus", whereby multi-modal input to such current (active) application is processed to perform a task in another application (auxiliary) application without either leaving the current application, opening new windows, etc. (see, Abstract) . For example, Fig. 2 of Johnson depicts a system whereby application A (43) is a current application "in focus" and one or more plurality of auxiliary applications (52, 53) can be accessed to perform a task associated, in part, with the *current application*. By way of example, Application A can be a word processing application, whereby a user writing a person's name can utter "find address" to retrieve the address of the person from an auxiliary database application and paste the retrieved address of the person in the letter being written with Application A (see, Col. 4, line 54-Col. 5, line2).

In other words, Johnson does not disclose a method for determining a target application for a given command among a plurality of active (open) applications, as essentially claimed in claims 1 and 10. In the inventions of claims 1 and 10, a user can interact multi-modally with a plurality of unrelated active applications. In contrast, Johnson discloses user interaction with one current application, and seamlessly accessing other applications in the background to provide information based, in part, on commands associated with the current application.

Further, Johnson does not disclose *changing dialog focus to one of a plurality of the active applications based on user interaction with the conversational system,* as essentially claimed in claims 1 and 10. "Dialog focus" denotes an application with which a user is currently interacting (see, Applicants' specification, page 11, lines 13-16). Since Johnson discloses user interaction with one active application, such application is always "in focus". Indeed, as noted above, although Johnson discloses cross-application tasks, tasks are performed in an auxiliary application without leaving the current application, opening new windows, etc. (see, Fig. 2, Col. 2, lines 3-8). As such, Johnson does not disclose *changing dialog focus to one of a plurality of the active applications.*

Furthermore, the combination of Johnson and Haddock does not disclose or suggest a *dialog manager determining a current context of the command by reviewing a multi-modal history of events,* as essentially claimed in claims 1 and 10. Indeed, Examiner acknowledges on page 3 that Johnson does not disclose such element.

However, Applicants respectfully disagree with Examiner's reliance on Haddock as disclosing *a dialog manager determining current context of the command by reviewing a multi-modal history of events.* Haddock discloses a method for resolving ambiguity in a database query by *displaying* one or more query cards and list of previous queries by the user, which enables a user to *manually* select (by mouse click) text items on a screen to provide referential input to remove ambiguity in a query. Thus, even assuming that the query cards disclosed by Haddock comprises a "history of events" as contended by Examiner, the Haddock system relies on manual

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user interaction with such "history" and actual human intelligence processing on part of the user to resolve an ambiguity of a command. This has no relation to the claimed process of determining by a dialog manager the current context of a command by reviewing a history of events, wherein the current command is associated with one of a plurality of active application, as essentially claimed in claims 1 and 10. Indeed, the claimed inventions are fundamentally different in that the determination of current context of a command is performed automatically by the dialog manager by processing a multi-modal history of events.

One of ordinary skill in the art would not look to the methods of Haddock (displaying query cards and lists of input queries to enable a user to manually input referential information) to develop an automated system where by context determination of a current command is automatically performed by a dialog manager, as in claims 1 and 10. Indeed, Examiner's conclusion of obviousness as set forth on page 3 of the Office Action, supporting the combination of Johnson and Haddock on the grounds that Haddock teaches "providing a user-friendly way to resolve ambiguity in a natural language system," essentially misses the point. The process of determining context of a given command by a dialog manager processing a multi-modal history of events is hardly a "user-friendly way to resolve ambiguity".

Thus, for at least the above reasons, claims 1 and 10 are believed to be patentable and non-obvious over the combination of Johnson and Haddock. Further, since claims 2-9 depend from claim 1 and claims 11-18 depend from claim 10, these claims are believed to be nonobvious

and patentable over such combination at least for the reasons given above for respective base claims 1 and 10.

Claim 19 is believed to be patentable and non-obvious over the combination of Haddock and Johnson at least for similar reasons given above with respect to claims 1 and 10, in that such combination does not disclose or suggest *a dialog manager that maintains a current dialog focus for one of a plurality of active applications and a list of expected responses for determining a current context of a given command,* much less a *multi-modal history for maintaining an event list of all events which affected a state of the system, wherein the multi-modal history is adapted to provide input to the dialog manager for determining the current context of the commands received,* as essentially claimed in claim 19.

Further, it is respectfully submitted that the combination of Haddock and Johnson does not disclose or suggest, *wherein the events in the multi-modal history include change of dialog focus events,* as essentially claimed in claim 19. Indeed, although Haddock arguably discloses maintaining a history of successive queries or "events linked by time", as contended by Examiner on page 5 of the Office Action, there is nothing in Haddock that remotely suggests a history of events including change of dialog focus events.

Thus, claim 19 is patentably over the combination of Johnson and Haddock. Further, since claims 20-25 depend from claim 19, these claims are believed to be nonobvious and patentable over such combination at least for the reasons given above for claims 19.

Accordingly, the withdrawal of all the rejections under 35 U.S.C. §103(a) is respectfully requested.

Respectfully submitted,

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